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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,675	03/29/2004	Hirokazu Yamagata	0756-7276	1165

31780 7590 06/10/2005

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EXAMINER

HU, SHOUXIANG

ART UNIT	PAPER NUMBER
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2811

DATE MAILED: 06/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/810,675

Applicant(s)

YAMAGATA ET AL.

Examiner

Shouxiang Hu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-24 and 31-47 is/are pending in the application.
- 4a) Of the above claim(s) 11,17,23,35 and 41 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-10,12-16,18-22,24,31-34,36-40 and 42-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 10/073,285.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>4/14/04 & 5/5/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Species II (embodiment of Figs. 3-6) in the reply filed on May 05, 2005 is acknowledged.
2. In addition, claims 11, 17, 23, 35 and 41 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being unreadable on the elected species of the embodiment of Figs. 3-6. And, upon the allowance of any of the pending independent claims, applicant will be entitled to consideration of these withdrawn claims.

Accordingly, claims 1-3, 5-24 and 31-47 are pending in this application; and claims 1-3, 5-10, 12-16, 18-22, 24, 31-34, 36-40 and 42-47 remain active in this office action.

Claim Objections

3. Claims 1-3, 5-10, 12-16, 18-22, 24, 31-34, 36-40 and 42-47 are objected to because of the following informalities and/or defects:

Claims 1-6 each recites the subject matter of "a bank over the wiring and the anode", but, according to the elected species of Figs. 3-6, only a portion of the anode 950 underlies the recited bank 946.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3, 5-10, 12-16, 18-22, 24, 31-34, 36-40 and 42-47, as being best understood in view of the claim objections above, are rejected under 35 U.S.C. 103(a) as being unpatentable over Ozawa (US 6,194,837) in view of JP'781 (JP 11-224781, 08, 1999; of record).

Ozawa disclose a light emitting display device (6, 8, 12 and 14, especially, Fig. 6A), comprising: a thin film transistor (having gate 31) on an insulating surface; an interlayer insulating film (52) over the thin film transistor; an anode (the horizontal portion of 41; ITO) over the interlayer insulating film; a wiring (the vertical or plug portion of 41) electrically connected to the thin film transistor and the anode; a bank over the wiring and the anode; an organic compound layer (42 and/or 43) over the anode and over (at least a side portion of) the bank; and a cathode (op) over the organic compound layer.

Although Ozawa does not expressly disclose that the device can further include a first insulating film between the anode and the organic compound layer, JP'781 teaches to include such an insulating film in order to improve the uniformity of the light-emitting compound layer and to reduce leaking current therethrough (see the first insulating layer 109 in Fig.1), wherein the first insulating layer (109) can be as thin as less than 5

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nm and can be formed of a polymer through coating (see paragraphs 0010-0017 and 0022-0024), which thus can be naturally regarded as an organic resin film.

Therefore, it would have been obviously to one of ordinary skill in the art at the time the invention was made to incorporate the first insulating layer of JP'781 into the device of Ozawa, so that a light-emitting device with reduced change for leaking current would be obtained. And, with the first insulating layer being laminated with the light-emitting compound layer as incorporated in a structure such as that in Fig. 6A of Ozawa, the first insulating layer in the collectively taught device would be naturally positioned over (at least a side portion of the) the bank therein.

Regarding claims 7-8, 13-14, 19-20, 31-32 and 37-38, it is noted that the average surface roughness (Ra) of the anode is an art-recognized resulted-oriented important parameter subject to routine experimentation and optimization; and that a low Ra such as in a range of 0.85 nm or less for the anode is always desirable in the art, for further reducing any potential current leakage.

Regarding claims 9, 15, 21, 33 and 39, it is noted that each of the cited insulating materials is commonly used in the art to form an interlayer insulating film.

Regarding claims 10, 16, 22, 34, 40 and 43-47, it is noted that it is art-known that the bank can be formed of a hardened resist/resin film that naturally includes the recited element(s) and is naturally insulating. In fact, the bank in Ozawa is formed of a resist layer (col. 9, line 64 through col. 10, line 8), which would have be to hardened in order to remain sufficiently firm and stable; and it thus can be naturally regarded as a hardened resist/resin film that naturally includes the recited element(s). In addition, it is

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noted that any process limitations recited or implicated in these claims would not carry patentable weight in the claims drawing to a structure, because distinct structure is not necessarily produced. In re Thorpe, 227 USPQ 964, 966 (Fed. Cir. 1985).

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shouxiang Hu whose telephone number is 571-272-1654. The examiner can normally be reached on Monday through Thursday, 7:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie C. Lee can be reached on 571-272-1732. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SH

June 7, 2005


SHOUXIANG HU
PRIMARY EXAMINER